



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Five hundred and fiftieth Meeting.

April 11, 1865. — MONTHLY MEETING.

The PRESIDENT in the chair.

Mr. Alexander Agassiz read a paper on the young of a species of *Planaria*.

Five hundred and fifty-first Meeting.

April 25, 1865. — SPECIAL MEETING.

The PRESIDENT in the chair.

Professor Lovering presented a report from the Rumford Committee, recommending that the Rumford Premium be awarded to Professor Daniel Treadwell for improvements in the management of heat, and the subject of the report was assigned as the special business of the meeting on the second Tuesday of May.

Professor Cooke made the following communication : —

An accident to one of the large turbine wheels employed by the Merrimack Manufacturing Corporation of Lowell has furnished a most remarkable illustration of the modern mechanical theory of heat, and through the kindness of Mr. Isaac Hinckley, the accomplished agent of the Corporation, I have the pleasure of bringing the facts to the notice of the Academy. I cannot do better than to begin by reading Mr. Hinckley's own statement, in a letter addressed to me, dated December 30th, 1864. The specimens referred to in the letter I have placed on the table for the inspection of the Academy.

"In accordance with your request, I herewith send you five pieces of metal, once portions of one of our turbines. I have placed these pieces in the box in the same relative positions which they occupied when they made a part of the turbine. To make my statement clear to you, I would refer to Plate I. of Mr. Francis's admirable work, 'Lowell Hydraulic Experiments,' which you will find in the College Library. Our turbines are similar to the Tremont turbine therein shown.

"The turbine of which these pieces were a part is one of 250 H. P., under a fall of 32 feet, using 75 cub. ft. of water per second. The wheel is of 58½ inches diameter, with depth of float of 6 inches, and a velocity